

ANNOTATIONES ZOOLOGICAE JAPONENSES

Volume 55, No. 3—September 1982

Published by the Zoological Society of Japan

Two New Species of False Spider Mites
(Acarina, Tenuipalpidae) from Japan¹⁾

With 6 Text-figures

Shôzô EHARA

*Biological Institute, Faculty of Education, Tottori University,
Tottori 680, Japan*

ABSTRACT Two new species of false spider mites are described from Japan: *Aegyptobia arenaria* from *Artemisia capillaris* THUNB. in Honshu, and *Tenuipalpus boninensis* from *Morinda boninensis* OHWI in Chichi-jima Island.

Prior to this study ten species of false spider mites were known to occur in Japan. In the present paper two new species of the mites from this country are described and illustrated: *Aegyptobia arenaria* from *Artemisia capillaris* THUNB. in Honshu, and *Tenuipalpus boninensis* from *Morinda boninensis* OHWI in Chichi-jima Island. The type-series of the new species are deposited in the collection of the Biological Institute, Faculty of Education, Tottori University.

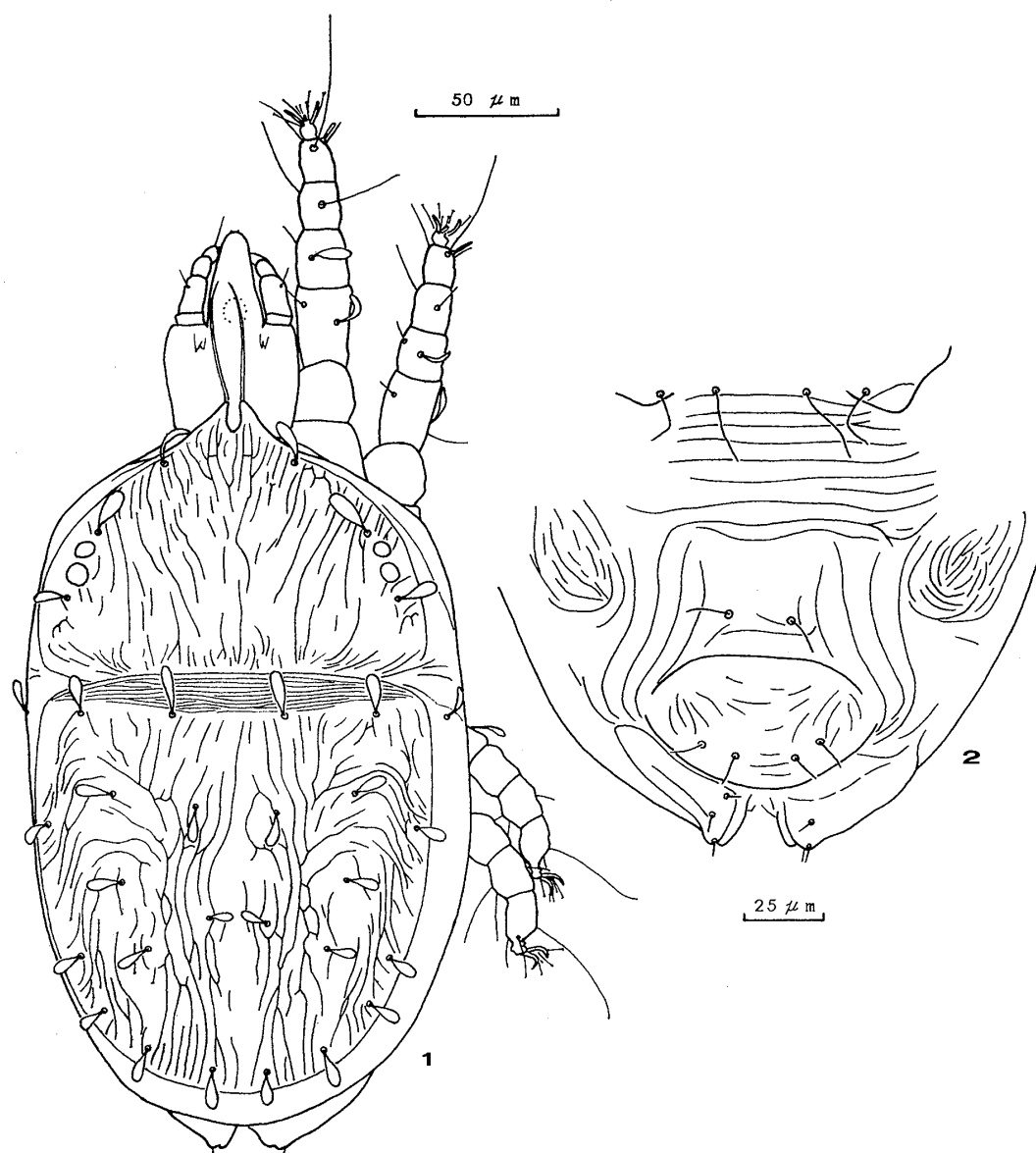
Aegyptobia arenaria n. sp.

[Japanese name: Suna-himehadani]

(Figs. 1–2)

Female. Color red. Rostral shield deeply emarginate medially. Dorsal idiosomal setae broadly spatulate, smooth: 3 pairs of propodosomals (P), one pair of humerals (H), 5 pairs of dorsolaterals (DL), 4 pairs of dorsosublaterals (DS), and 3 pairs of dorsocentrals (DC). Dorsum of propodosoma with longitudinal striae; hysterosomal dorsum with longitudinal striae except for the sublateral area of setae DS₂ and DS₃ which is transversely striate; no distinct pores. Medioventral propodosomal setae very long, smooth; anterior and posterior medioventral metapodosomals smooth, the former much shorter than distance to base of opposite member; medioventral opisthosomals and genital setae more or less serrate; anal setae slightly serrate. Venter of opisthosoma as figured. Rostrum reaching distal

1) This study was supported by a Grant-in-Aid for Scientific Research (No. 56560049) from the Ministry of Education, Science and Culture, Japan.



Figs. 1-2. *Aegyptobia arenaria* n. sp. (♀).—1. Dorsum. 2. Venter of opisthosoma.

end of genu I. Palpus with one solenidion and 2 tactile setae on distal segment. Femora I, II and III each, and genua I and II each with a broadly spatulate smooth seta dorsally; genua I and II each with 3 setae in total, genu III with one seta, genu IV without setae; tarsi I and II each with a single sensory rod posterodistally. Claws hooked, empodia pad-like. Measurements in μm : body length (including rostrum) 330, body width 170; lengths of setae²⁾: P_1 17.3 ± 0.5 , P_2 18.6 ± 0.4 , P_3 15.0 ± 0.4 , H 11.9 ± 0.4 , DL_1 11.9 ± 0.3 , DL_2 11.8 ± 0.3 , DL_3 10.5 ± 0.4 , DL_4 13.1 ± 0.4 , DL_5 13.5 ± 0.3 , DS_1 15.3 ± 0.3 , DS_2 13.8 ± 0.2 , DS_3 13.3 ± 0.2 , DS_4 12.7 ± 0.3 ,

2) Mean \pm standard error, $n=10$.

DC₁ 18.3±0.4, DC₂ 13.4±0.2, DC₃ 11.6±0.3; anterior and posterior medioventral metapodosomals 15.6±0.6 and 24.6±0.8, medioventral opisthosomals 13.8±0.3, inner genitals 8.3±0.3, outer genitals 9.0±0.3.

Male. Not known.

Type-series. Holotype: ♀, Tottori sand dune, Tottori Pref., Honshu, 25-IX-1979 (M. HIROTA), on *Artemisia capillaris* THUNB. Paratypes: 16 ♀♀, 1-IX-1981 (S. EHARA), other data same as for holotype.

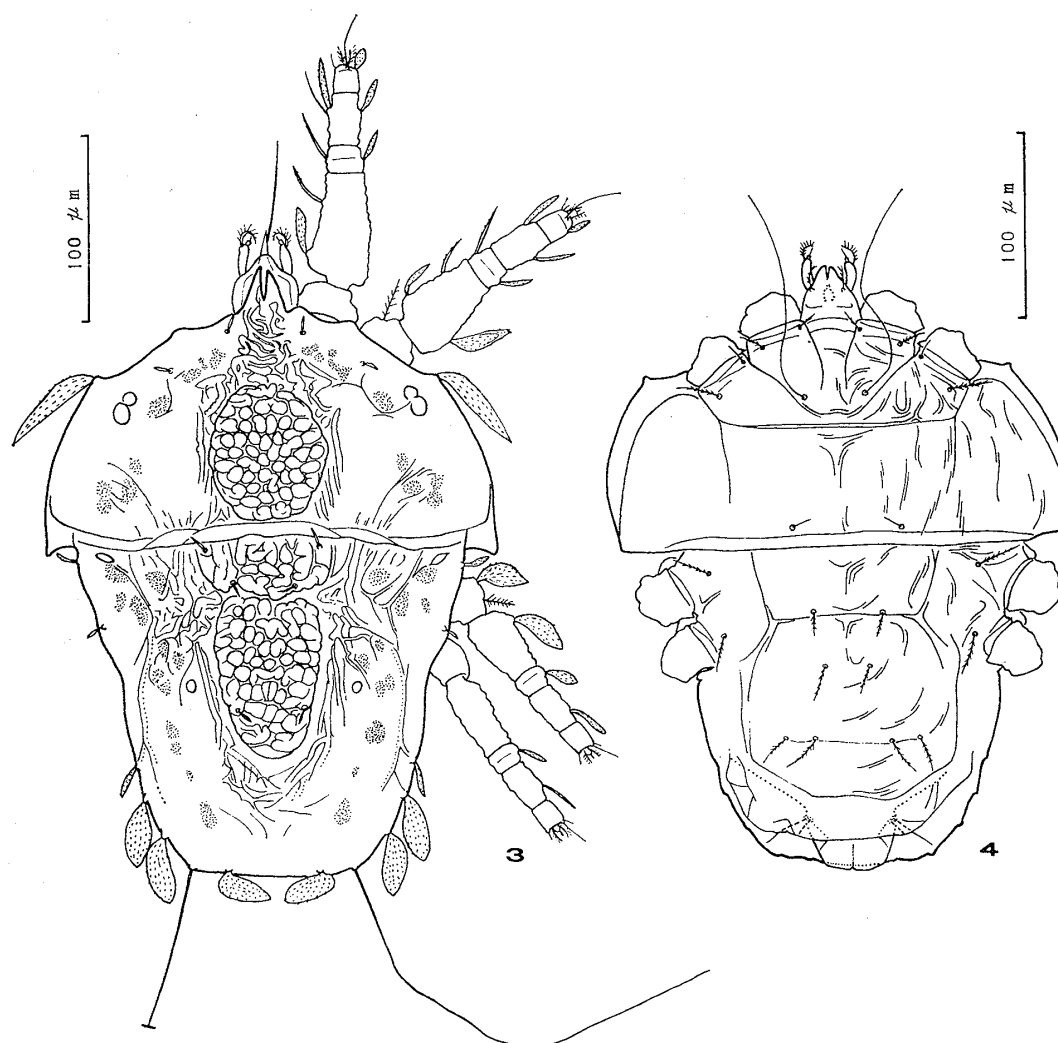
Remarks. *Aegyptobia arenaria* resembles *A. forma* CHAUDHRI, 1972 (Pakistan), but has fewer, widely spaced striae on the propodosomal dorsum.

***Tenuipalpus boninensis* n. sp.**

[Japanese name: Hanagasa-himehadani]

(Figs. 3-6)

Female. Color pale yellow to brown. Rostral shield deeply cleft medially, with lateral angulations. Dorsum of propodosoma with a rounded reticulate area posteromedially, with irregular coarse striae anterior to the reticulate area; posterolateral corners of propodosoma more or less angulate. First and second dorsal propodosomals minute, slightly serrate; the third broadly lanceolate, serrate, approximately as long as one half of the distance between its base and posterior margin of propodosoma. Hysterosoma with an elongate reticulate area medio-dorsally, the area broken behind second pair of dorsocentral setae; striae of the mediolateral and lateral parts as figured; without projection anterior to coxa III; 2 pairs of hysterosomal pores present. Dorsocentrals three-paired, minute, slightly serrate; humerals lanceolate, serrate; first dorsolaterals minute, slightly serrate; the second lanceolate, serrate, about as long as the distance between its base and that of the third; the third, the fourth and the sixth subspatulate, serrate; the fifth very long, flagelliform, and smooth except for the finely serrate proximal portion. Podosoma with a pair of very long, smooth medioventral propodosomals, a pair of smooth anterior medioventral metapodosomals and a pair of plumose posterior medioventral metapodosomals; medioventral opisthosomals, genital setae, and anal setae plumose. Striae of opisthosomal venter considerably variable between specimens. Rostrum with a pair of plumose ventral setae. Palpus with three segments, the distal segment with a single seta. Legs with many of the setae widened; genua I and II each with 2 setae, genua III and IV each with one seta; tarsi I and II each with sensory rod very slender, usually curved. Measurements in μm : body length (including rostrum) 310, body width 220; lengths of setae: P₁ 8.1±0.2, P₂ 7.9±0.2, P₃ 52.3±1.1, H 13.2±0.4, DL₁ 8.2±0.3, DL₂ 16.1±0.4, DL₃ 32.3±0.8, DL₄ 31.4±0.4, DL₅ 220.2±4.2, DL₆ 25.9±0.4, DC₁ 9.9±0.3, DC₂ 7.7±0.2, DC₃ 7.7±0.2; anterior and posterior medioventral metapodosomals 12.1±0.4 and 12.9±0.4, medioventral opisthosomals 16.2±1.1, inner genitals 17.9±0.5, outer genitals 18.1±0.3, inner anals 10.8±0.4, outer anals 23.8±0.4.

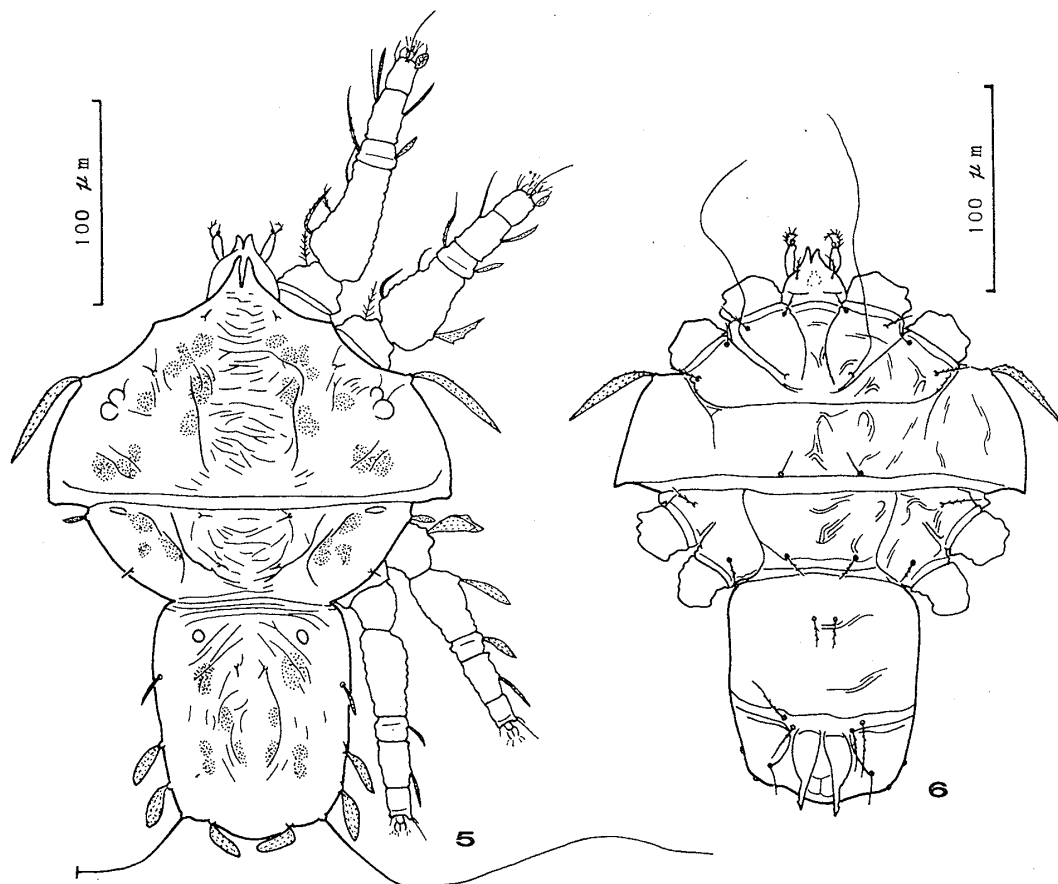


Figs. 3–4. *Tenuipalpus boninensis* n. sp. (♀).—3. Dorsum. 4. Venter.

Male. Dorsum of idiosoma striate as illustrated. Dorsal idiosomal setae and leg setae similar to those of female, but generally narrower. Venter as figured. Measurements in μm : body length (including rostrum) 260, body width 175; lengths of setae: P_1 7.1 ± 0.2 , P_2 6.5 ± 0.3 , P_3 43.3 ± 1.3 , H 12.0 ± 0.2 , DL_1 6.7 ± 0.2 , DL_2 12.3 ± 0.6 , DL_3 21.1 ± 0.7 , DL_4 21.4 ± 0.3 , DL_5 186.7 ± 3.6 , DL_6 19.7 ± 0.4 , DC_1 6.2 ± 0.1 , DC_2 5.5 ± 0.2 , DC_3 5.1 ± 0.2 ; anterior and posterior medioventral metapodosomals 12.3 ± 0.5 and 15.2 ± 0.7 , medioventral opisthosomals 14.8 ± 0.5 , inner genitals 19.3 ± 0.8 , outer genitals 22.6 ± 0.5 , anals 14.8 ± 0.6 .

Type-series. Holotype: ♀, Chichi-jima Island, the Bonin Islands, 21–III–1981 (S. KAWAI), on *Morinda boninensis* OHWI. Paratypes: 14 ♀♀ and 7 ♂♂, data same as for holotype.

Remarks. The female of *Tenuipalpus boninensis* is somewhat similar to *T.*



Figs. 5–6. *Tenuipalpus boninensis* n. sp. (♂).—5. Dorsum. 6. Venter.

decus CHAUDHRI, 1974 (Pakistan), but differs from the latter in that the third pair of the dorsal propodosomal setae are approximately one half as long as the distance between their bases and the posterior margin of the propodosoma.

ACKNOWLEDGEMENTS

The writer wishes to thank Mr. S. KAWAI (Tokyo-to Agricultural Experiment Station), Mr. H. NEMOTO (Saitama Horticultural Experiment Station), and Associate Prof. H. SHIMIZU and Miss M. HIROTA (Tottori University) for their kind help in the course of this study.

REFERENCES

- CHAUDHRI, W. M., 1972. Five new species of mites of the genus *Aegyptobia* from Pakistan (Acarina: Tenuipalpidae). *Pak. J. Sci.*, **24**: 18–24.
 ———, 1974. Taxonomic studies of the mites belonging to the families Tenuipalpidae, Tetranychidae, Tuckerellidae, Caligonellidae, Stigmaeidae and Phytoseiidae. xvi+250 pp. Univ. Agr., Lyallpur.